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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,697	04/04/2002	Takashi Mimura	1061-02	9428

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EXAMINER

VO, HAI

ART UNIT PAPER NUMBER

1771

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/070,697

Applicant(s)

MIMURA ET AL.

Examiner

Hai Vo

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. All of the art rejections have been withdrawn in view of the present amendment.

The combined teachings of the cited references does not teach a reflector wherein the coating layer comprises mainly a copolymer of a resin with a light stabilizer component. However, upon further consideration, new grounds of rejections are made in view of WO 00/02964, which is an equivalent form of Ogawa et al (US 6,703,139).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyakawa et al (US 5,672,409) in view of WO 00/02964. US 6,703,139 to Ogawa et al is relied on as an equivalent form of WO 00/02964. Miyakawa teaches a reflector for surface light sources comprising a white film having a three-layer structure A/B/A wherein the B-layer is made of a polyester resin and contains fine voids (column 6, lines 35-40, example 2). Miyakawa teaches a coating layer on the white film comprising a mixture of acrylic resin, silica particles, and fluorescent whitening agent (example 5). Miyakawa discloses the white film having the degree of glossiness within the claimed range (table 1). Miyakawa teaches the white film is formed from a resin composition consisting essentially of polyester (column 3, lines 25-45). Miyakawa teaches that the voids

are formed through melt extrusion of a mixture of a polyester resin, a polyolefin resin, and inorganic particles, followed by stretching the film in at least one direction (column 3, line 59 et seq.). Miyakawa is silent as to the coating layer comprising a copolymer of an acrylic resin with a light stabilizer component.

Ogawa, however, discloses the use of a weather resistant composition coating on the optical instruments comprising an ultraviolet absorber, a methacrylic monomer and a curing agent (column 4, lines 20-65, column 16, lines 65-67, table 8). Likewise, Ogawa discloses the weather resistant composition coating comprising a copolymer of a methacrylic resin and an ultraviolet absorber.

Ogawa teaches the ultraviolet absorber can be RUVA-1 or UVA-1 (column 18, lines 35-65). Ogawa discloses bisbenzotriazolyphenol renders the coating material superior in weather resistance over conventional UV absorber

benzophenone. Ogawa has recognized the draw back associated with the use of conventional UV absorber and is the first who has invented the use of the coating layer comprising a copolymer of a methacrylic resin with a benzophenone before Applicants (see tables 1, 5, 6 and 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the combination of an acrylic acid resin with an UV absorber in the presence of a curing agent as a coating layer of Miyawa motivated by the desire to provide the coating layer exhibiting excellent weather resistance and transparency for a prolonged period and less likely to cause surface cracks.

Miyakawa does not specifically disclose that the voids in the surface layer are smaller than the voids in the inner layer. However, Miyakawa teaches that the A-layer contains inorganic fine particles and the sheet of the laminated polymers A/B/A is stretched in at least one direction (example 3). It appears that Miyakawa and Applicants are using inorganic particles having similar particle size and present in the same amounts in the A- and B-layers (Miyakawa, column 6, lines 40-42, 60-65 vs. Applicants' specification, pages 10 and 22). Further, Miyakawa is using the same approach to form the voids in the white film. The voids are created around the inorganic particles through stretching. Therefore, it is the examiner's position that the relative void diameter in the A-layer and B-layer would be inherently present because it seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties.

4. Claims 13-17, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al (US 5,710,856) in view of WO 00/02964. US 6,703,139 to Ogawa et al is relied on as an equivalent form of WO 00/02964. Ishii discloses a light reflective sheet comprising a porous resin sheet and a protective layer laminated on at least one surface of the porous resin sheet (abstract). Ishii discloses that the protective layer contains a light stabilizer component (column 14, lines 45-48, column 8, line 61). Ishii teaches the coating

layer further comprising inorganic fine particles (column 13, lines 60-62). Ishii teaches a light reflective sheet having a light reflectance greater than 85% (table 1). Ishii teaches a porous resin layer comprising a fluorescent brightener (column 8, lines 50-57). Ishii does not specifically disclose the protective layer containing a copolymer of an acrylic resin and an UV absorber. Ogawa, however, discloses the use of a weather resistant composition coating on the optical instruments comprising an ultraviolet absorber, a methacrylic monomer and a curing agent (column 4, lines 20-65, column 16, lines 65-67, table 8). Likewise, Ogawa discloses the weather resistant composition coating comprising a copolymer of a methacrylic resin and an ultraviolet absorber. Ogawa teaches the ultraviolet absorber can be RUVA-1 or UVA-1 (column 18, lines 35-65). Ogawa discloses that bisbenzotriazolyphenol renders the coating material superior in weather resistance over conventional UV absorber benzophenone. Ogawa has recognized the draw back associated with the use of conventional UV absorber and is the first who has invented the use of the coating layer comprising a copolymer of a methacrylic resin with a benzophenone before Applicants (see tables 1, 5, 6 and 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the combination of an acrylic acid resin with an UV absorber in the presence of a curing agent as a coating layer of Ishii motivated by the desire to provide the coating layer exhibiting excellent weather resistance and transparency for a prolonged period and less likely to cause surface cracks.

Ishii does not specifically disclose the degree of glossiness of the light reflective sheet. However, the light reflective sheet of Ishii as modified Ogawa is structurally the same and made of the same materials as Applicants' article. It appears that the light reflective sheet of Ishii as modified by Ogawa has a light reflectance within the claimed range. Therefore, it is not seen that the modified light reflective sheet would have possessed the degree of glossiness outside the range as claimed by the present invention. This is in line with *Ex part slob*, 157 USPQ 172. It seems from the claim, if one meets the structure recited, the properties must be met or Applicant's claim is incomplete.

5. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al (US 5,710,856) in view of WO 00/02964 as applied to claim 13 above, further in view of Miyakawa et al (US 5,672,409). Ishii does not disclose the porous resin layer being a composite film. Miyakawa, however, teaches a reflector for surface light sources comprising a white film having a three-layer structure A/B/A wherein the B-layer contains fine voids (column 6, lines 35-40, example 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the porous resin layer in the form of a composite film having a layer construction as taught by Miyakawa motivated by the desire to provide to enhance structural stability of the white film.

#### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Friday, from 6:00 to 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

*Hai Vo*

**HAIVO  
PRIMARY EXAMINER**